

September 27, 1956

Dear Bernie:

Thank you for sending us 173-25. But unfortunately it grows very well on plain minimal agar, as did several single-colony reisolations. Have you had any particular trouble with reversion in this strain? We did pass the culture through penassay broth, and this may have started the problem. If Bampelic acid is unique to bacterial walls, how do you feed the mutant on nutrient agar? The mass culture does look interesting, as there is a small but still unusual proportion of protoplasmic forms or ghosts, among the bacteria. We could try to do a more thorough analysis, but it would save us considerable effort if we could have a recertified culture from you, perhaps with some data on your sucrose-restoration experiment.

Congratulations to you and Elizabeth of your fad-- or is it PAD. Will the next one be a D, N.A.?

Can I press you further on the genealogy of J2-1. I ~~think~~ believe you told me this is a hist⁻ from a lac⁻ from K-12. Would the lac⁻ be J2? You also stated that the lac⁻ parent is lost. Do you have any other ~~at~~ mutants derived from the same lac⁻ parent? We are trying to unravel the relationship between the hist, lac⁻ and constitutive-lactase characters in the ~~J2~~ J2-1 strain.

The coli-L colonies story is driving us crazy. All last week we were getting nothing again, then found that a new lot of Difco agar was responsible. So we checked a number of lots, and ~~know~~ find a batch of New Zealand agar which is the most satisfactory for getting L-colonies from K-12. But only some mutant strains and not others work, with no obvious pattern. This is science?
on L-forms

I am running into more and more papers/which anticipated the penicillin-sucrose-protoplast story. The main hurdle was a semantic one: no one, including myself, was much interested in that "fuzzy" type of work. It's too late to change the PNAS account, but I'm thinking of sending a brief note to J. Bact. as a partial disclaimer, and also to clarify the speculative mechanism of penicillin action. A rough version of same is enclosed.

Yours sincerely,

Joshua Lederberg